

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/078187 A1**

(51) International Patent Classification<sup>7</sup>: **D21F 11/04**

(21) International Application Number:  
PCT/FI2005/050026

(22) International Filing Date: 11 February 2005 (11.02.2005)

(25) Filing Language: Finnish

(26) Publication Language: English

(30) Priority Data:  
20040224 13 February 2004 (13.02.2004) FI

(71) Applicant (for all designated States except US): **METSO PAPER, INC.** [FI/FI]; Fabianinkatu 9 A, FI-00130 HELSINKI (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RÄISÄNEN, Kari** [FI/FI]; Rajalantie 5, FI-40950 Muurame (FI). **POIKOLAINEN, Antti** [FI/FI]; Ritopohjantie 5 as 4, FI-40250 JYVÄSKYLÄ (FI).

(74) Agent: **FORSSÉN & SALOMAA OY**; Eerikinkatu 2, FI-00100 HELSINKI (FI).

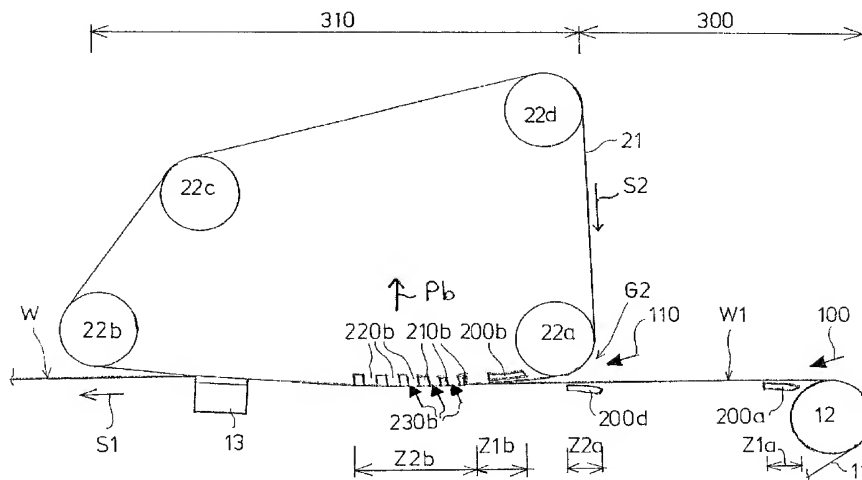
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MULTI-LAYER WEB FORMATION SECTION



(57) Abstract: Multi-layer web formation section having at least two successive wire units (300, 310), which have one wire (11) in common. A first headbox (100) supplies fibre pulp to the forward end of the first wire unit (300) and a second headbox (110) supplies a new fibre pulp layer to the forward end of the second wire unit (310) atop a first partial web (W1) formed in the first wire unit (300). In the forward end of a two-wire stretch of the second wire unit (310) there is a first non-pulsating dewatering zone (Z1b), which comprises at least one first formation shoe (200b), which has a curved cap (201) placed on the side of the new fibre pulp layer and provided with openings (202) extending through the cap (201), and an under-pressure (P) affecting through the cap's (201) openings (202). A two-wire stretch of the second wire unit (310) has a second pulsating dewatering zone (Z2b), which is formed by fixed dewatering lists (210b), between which there are gaps (220b) and an under-pressure (Pb) affecting in these.

WO 2005/078187 A1